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Ruffa

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(54) **PUNCTURE PROOF TIRE EMPLOYING AN ELONGATED BODY TUBE HAVING SHEAR RESISTANT FILM**

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(58) **Field of Search** 152/157, 158, 152/165, 166, 316, 317, 320, 322, 516, 331.1, 310–312, 328; 156/113, 119

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(57) **ABSTRACT**

The invention is directed to a high-speed, puncture proof tire including a tire casing having a tread portion and a pair of side wall portions and a plurality of small diameter pressurized tubes disposed within the tire casing. Each pressurized tube has an elongate body fabricated from film material that is sealed crosswise along the length of the body to define at least two compartments that contain gas under pressure. The tubes can be oriented radially or circumferentially within the annular space of the tire casing. In another embodiment of the tire, at least one panel of film material resistant to shear forces is disposed within the annular space of the tire casing. The panel is sealed lengthwise thereof to define a plurality of small diameter pressurized tubes. Each pressurized tube is sealed crosswise along the length of the tube to define at least two compartments that contain gas under pressure.

13 Claims, 2 Drawing Sheets